Approved For Release 2005/01/31 CIA-RDP79M00467A002500080011-5

25X1

	8 Se	ptember 1976	
MEMORANDUM FOR:	Director of Central Intell	igence	
FROM :	Ernest J. Zellmer Associate Deputy Director and Technology	for Science	r
SUBJECT :	CIA Position on BACKFIRE		
BACKFIRE. Also of provides two ran to the wing desi the BACKFIRE cap program and are 2. One of these is potential. To rincreases the function of the function	forwarded herewith are the As you will note, the ges of value because we are gn. We believe these value abilities as demonstrated is representative of the produce provides two addesignated flight data extract each this estimate, el load at the risk of aircommon and, not en the reason for its inclusese are possible changes, because of the second of t	conclusions ne OWI analysis e uncertain as es encompass in the test action aircraft. 25X1 ditional estimates. capolated to craft losses on take- ot incidentally, asion. We do not	
requested. It r	eflects possible improvemen	its which could,	D
ponents concerne given to Andy Ma will be about a these reports wi editing, graphic is essentially	were provided to the intelled with BACKFIRE analysis. Irshall for use with his remonth before formally publicated and publicate complete and the estimated of the stimated of	ligence com- A copy was also view group. It ished copies of e is needed for ion. Our analysis performance of	D
		Cy # 2.	
	I. Attache BACKFIRE. Also of provides two ran to the wing desi the BACKFIRE cap program and are 2. One of these is potential. To r increases the fu off. Force pressure [this may have be disagree that th reflect the data 3. The thi requested. It r in the future, b 4. Yesterd studies ponents concerne given to Andy Ma will be about a these reports wi editing, graphic is essentially of	MEMORANDUM FOR: Director of Central Intell FROM: Ernest J. Zellmer Associate Deputy Director and Technology SUBJECT: CIA Position on BACKFIRE 1. Attached are the conclusions of ON BACKFIRE. Also forwarded herewith are the of As you will note, the provides two ranges of value because we are to the wing design. We believe these value the BACKFIRE capabilities as demonstrated in program and are representative of the production of these is designated flight data extrapotential. To reach this estimate, increases the fuel load at the risk of air coff. To could be expected to result this may have been the reason for its including and have been the reason for its including and have been the data we have. 3. The third estimate, studies were provided to the intell ponents concerned with BACKFIRE to improvement in the future, be made to BACKFIRE to improvement concerned with BACKFIRE analysis. given to Andy Marshall for use with his rewill be about a month before formally publicating, graphics development and publicating sessentially complete and the estimated	Associate Deputy Director for Science and Technology SUBJECT: CIA Position on BACKFIRE 1. Attached are the conclusions of OWI/DDS&T on BACKFIRE. Also forwarded herewith are the conclusions of provides two ranges of value because we are uncertain as to the wing design. We believe these values encompass the BACKFIRE capabilities as demonstrated in the test program and are representative of the production aircraft. 2. provides two additional estimates. One of these is designated flight data extrapolated to potential. To reach this estimate, provides two additional estimates. Increases the fuel load at the risk of aircraft losses on take off. It could be expected to result in reduced Air force pressure and, not incidentally, this may have been the reason for its inclusion. We do not disagree that these are possible changes, but they do not reflect the data we have. 3. The third estimate is one we requested. It reflects possible improvements which could, in the future, be made to BACKFIRE to improve performance. 4. Yesterday, copies of the draft CIA and studies were provided to the intelligence components concerned with BACKFIRE analysis. A copy was also given to Andy Marshall for use with his review group. It will be about a month before formally published copies of these reports will be available. This time is needed for editing, graphics development and publication. Our analysis is essentially complete and the estimated performance of BACKFIRE is documented in the draft report.

E2 Approved For Release 2005/01/31 : CIA-RDP79M00467A002500080011-5

25X1

25X1A

25X1A

25X1A

Approved For Release 2005/01/31 : CIA-RDP79M00467A002500080011-5

SUBJECT: CIA Position on BACKFIRE

5. Community review in WSSIC and in conjunction with NIE 11-3-8/76 can now begin. Meanwhile, it will be necessary for the CIA to express its views on BACKFIRE in several arenas. There are no complications to doing so in the community review process leading to NIE 11-3-8/76. However, in other areas it may be inappropriate to continue to speak of preliminary and unfinished analyses when that status has changed, albeit without yet having published a formal report. Considering the sensitivity of the issue, your guidance on this matter is solicited. If you agree that CIA should now use the results of its completed analysis, the mechanics for an early formalization of the conclusions of the analysis can be arranged.

Ernest %. Zellmer

Attachments:
As Stated

Approved For Release 2005/01/31 : CIA-RDP79M00467A002500080011-5

SUBJECT: CIA Position on BACKFIRE

Distribution:

Orig. - DCI 1 - DDCI

1 - D/OWI 1 - ER

1 - EZ Chrono 1 - DDS&T Registry

25X1A

O/DDS&T:EJZellmer: 8Sept.76

	-		Release 2005	OPSIASRDP79M		0.0080011-5		
***		ppro 🕶 For l	Keleuse 2000/6-170		IOOTOI AOOEO		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
K1D		g 1972-19	73				avail-	•
able esta		าก ลอทดสืบเ	namic, propu	leion and	dat	a were u	o+ haz	•
(1A the	BACKFI	RE bomber.	• I		the desi	an's not	ential	
per: of t	ormance	e characte e determin	eristics, co ned from pho	mpatible w	ith a twi	n-engine	hombor	
- tem	derive	i from the	e CHARGER NK	-144 engin	e data ba	se, were	zna- zna-	-
	cally e	estimated	(Reference	1).			•	
K1C	During	1975-197	76		af	ollow-up	analy-	25X′
(1D <u>515</u>	was in	tlated to	establish data co	performance vering a f	e charact ive vear	eristics period	from This	1 1
repo		prese	ents the res	ults of th	is			25X ⁻
- Nagar /	ysis.			showed the	at BACKFI	RE was no	ot.	}
(1D oper	ated at	condition	ons compatib	le with the	e design'	s potent	ial	
. Deri	OTHATICE	: •			<u>.</u>			
(10)								
(1 D								
(1D	The pr	incipal f	actors					
(1 D	The pr	incipal f	actors				•	
(1D	·							
(1D	1. Le	ss than p	oredicted tal	ceoff lift	capabili	ty becaus	se the	
(1D	l. Le	ss than p	redicted tal	ceoff lift	capabili d than as:	ty becaus	se the	
(1D	1. Le fl Re	ss than p ap system ference 1	oredicted tal is less sop	phisticated	l than as:	sumed in	•	
(1D	1. Le fl Re 2. Le	ss than p ap system ference 1 ss afterb -144 engi	redicted take of take	phisticated If thrust to a	than as: than experience	sumed in cted from ed afterb	n the	
(1D	1. Le fl Re 2. Le	ss than p ap system ference 1 ss afterb -144 engi	oredicted tal is less sop	phisticated If thrust to a	than as: than experience	sumed in cted from ed afterb	n the	
(1D	1. Le fl Re 2. Le NK fu	ss than p ap system ference 1 ss afterb -144 engi el flow a	oredicted take is less son the contract take of the contract take of the contract take of the contract town mach is seen to be contract to the	phisticated Ef thrust to y due to a numbers and	than as: than experience restricte laltitude	sumed in cted from ed afterl	n the ourner	
(1D	1. Le fl Re 2. Le NK fu 3. De wi	ss than p ap system ference 1 ss afterb -144 engi el flow a creased e th decrea	predicted take is less son urner takeon ne, probably t low Mach restinate of ised fuselage	Phisticated If thrust to a numbers and Internal fo	than as: than experiented altitude altitude	sumed in cted from ed afterles.	n the ourner ociated	
(1D	1. Le fl Re 2. Le NK fu 3. De wi	ss than p ap system ference 1 ss afterb -144 engi el flow a creased e	predicted take is less son urner takeon ne, probably t low Mach restinate of ised fuselage	Phisticated If thrust to a numbers and Internal fo	than as: than experiented altitude altitude	sumed in cted from ed afterles.	n the ourner	
(1D	1. Le fl Re 2. Le NK fu 3. De wi	ss than p ap system ference 1 ss afterb -144 engi el flow a creased e th decrea	predicted take is less son urner takeon ne, probably t low Mach restinate of ised fuselage	Phisticated If thrust to a numbers and Internal fo	than as: than experiented altitude altitude	sumed in cted from ed afterles.	n the ourner	
	1. Le fl Re 2. Le NK fu 3. De wi	ss than p ap system ference 1 ss afterb -144 engi el flow a creased e th decrea	predicted take is less son urner takeon ne, probably t low Mach restinate of ised fuselage	Phisticated If thrust to a numbers and Internal fo	than as: than experiented altitude altitude	sumed in cted from ed afterles.	n the ourner	
	1. Le fl Re 2. Le NK fu 3. De wi	ss than p ap system ference 1 ss afterb -144 engi el flow a creased e th decrea	predicted take is less son urner takeon ne, probably t low Mach restinate of ised fuselage	Phisticated If thrust to a numbers and Internal fo	than as: than experiented altitude altitude	sumed in cted from ed afterles.	n the ourner	
(1A	1. Le fl Re 2. Le NK fu 3. De wi ph	ss than p ap system ference 1 ss afterb -144 engi el flow a creased e th decrea	predicted take is less son urner takeon ne, probably t low Mach restinate of ised fuselage	Phisticated If thrust to a numbers and Internal fo	than as: than experiented altitude altitude	sumed in cted from ed afterles.	n the ourner	
	1. Le fl Re 2. Le NK fu 3. De wi ph	ss than p ap system ference 1 ss afterb -144 engi el flow a creased e th decrea	predicted take is less son urner takeon ne, probably t low Mach restinate of ised fuselage	Phisticated If thrust to a numbers and Internal fo	than as: than experiented altitude altitude	sumed in cted from ed afterles.	n the ourner	

Instal Approved for Release 2005/04/31; CIA-RD779M00467A002500080011.5t
assumed in the analytical studies, with a corresponding afterburner
thrust increase to compensate for the higher drag resulting from
a high lift flap system, would easily permit BACKFIRE to achieve
its predicted design TOGW and to fly at more fuel-efficient
altitudes. Maximum-fuel (147,000 lb) range would closely approximate the previously predicted basic-fuel (148,000 lb) range.

The single-engine, sea level, standard-day rate of climb of the operationally observed BACKFIRE is less than 100 ft/min when the takeoff weight exceeds approximately 230,000 lb. Operation at greater weights might unduly risk aircraft and crew. That fact may mean that either:

1.	The design takeoff weight is in the vicinty of 230 or	0,000 1b, 25X4I
evaluati States a size of bility,	osequent to the completion of Reference 1, a technolion analysis (Reference 8) indicated that if the Unitarization industry had designed a twin engine bomber BACKFIRE, with engine thrust matched to flap lift a takeoff gross weight of 305,000 lb and range of a miles would appear possible.	ited of the capa-
4.	Refueling extends BACKFIRE range capability subst If refueled at optimum distances, about 1600 nm f home base, ranges in excess of 6000 nm for the as aircraft are possible; i.e., BACKFIRE can easily Cuba when operating from Northern LRA bases.	rom -observed
ECRET		

. 1		

25X1A

Next 1 Page(s) In Document Exempt

	Approvale P	ිරි කිස් 2005			550 080011-5
•	OFFI	CIA HERE	victo any opinio		
то	NAME AN	D ADDRESS	DATE	INITIALS	
1	DDCI				
2					
3					
4					
5					
6					
	ACTION	DIRECT REPLY		E REPLY	
	APPROVAL	DISPATCH		MENDATION	1
L	COMMENT	FILE	RETURN		1
<u> </u>	CONCURRENCE	INFORMATION	Janai	y n E	1
Rei	This me date to pro	inde buckgrowe inde buckgrowe evening with	ed this age is for his Scentlery	leta o Clements	

FOLD HERE TO RETURN TO SENDER
FROM: NAME, ADDRESS AND PHONE NO. DATE

DOITING
UNCLASSIFIED CONFIDENTIAL SECRET

(40)

FORM NO. 237 Use previous editions

T-10.2

25X1A

· TO:	NAME A	ND ADDRESS	DATE	INITIALS	RDP79M00467A002500	Top Secret	
1					-	(Security Classification)	_ 25)
2						(Occurry Glassification)	20,
3					V-,_		
4					CONTROL NO		
	ACTION	DIRECT REPLY	PREPA	RE REPLY	CONTROL NO	1	
	APPROVAL COMMENT	DISPATCH FILE		MENDATION			
	CONCURRENCE	INFORMATION	RETUR			7 ->	
REMA	ARKS:	THE OWNER THE	LOIUNA	TUKE			
				ļ			
				ĺ			
				ı			

Handle Via

TALENT-KEYHOLE-COMINT

Channels

those approved for the following specific activities:				
		·		



Warning Notice
Sensitive Intelligence Sources and Methods Involved

NATIONAL SECURITY INFORMATION
Unauthorized Disclosure Subject to Criminal Sanctions

Top Secret